Claims

1. An apparatus comprising:

  a first solid-state memory die;

5   a second solid-state memory die; and

  a controller sensing one or more operating parameters for the first and the second solid-state memory die and making intelligent decisions on where to write data, based on the operating parameters.

10 2. The apparatus of claim 1 wherein the first and second solid-state memory die comprises flash memory, MRAM, SRAM, DRAM, FRAM, or polymer memory.

3. The apparatus of claim 1 wherein the operating parameters comprise temperature, current draw, or access time.

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4. The apparatus of claim 1 further comprising a database storing known operating models for the first and the second die.

5. The apparatus of claim 1 further comprising a database storing known operating
20 models for the first and the second solid-state memory die, and wherein the controller senses one or more operating parameters for the first and the second solid-state memory die and accesses the known operating models for the first and the second die and makes intelligent decisions on where to write data, based on the operating parameters and the known operating models.

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6. The apparatus of claim 1 further comprising a File Access Table (FAT) storing available memory locations within the first and the second die.

7. An apparatus comprising:
30 a performance model database storing historical operating parameters for a plurality of memory die;

a processor/test controller having operating parameters for the plurality of memory die as an input and outputting optimal storage locations;

a controller having data as an input and outputting the data destined to be written to a first memory location; and

5   a hardware re-router having the optimal storage locations as an input along with the data, and re-routing the data, based on the optimal storage locations.

8. The apparatus of claim 7 wherein the memory die comprises memory taken from the group consisting of flash memory, MRAM, SRAM, DRAM, FRAM, and polymer

10   memory.

9. The apparatus of claim 7 wherein the operating parameters comprise operating parameters taken from the group consisting of temperature, current draw, access times, and whether the memory die is functional.

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10. A method for accessing a collection of one or more solid-state memory die, the method comprising the steps of:

retrieving operating parameters from the solid-state memory die;

retrieving operating models for the solid-state memory die;

20   comparing the operating models with the operating parameters;

determining a memory location to write data, based on the comparison; and

writing the data to the memory location.

11. The method of claim 10 further comprising the step of updating a file-access table

25   (FAT) based on the step of writing the data to the memory location.

12. The method of claim 10 further comprising the step of:

updating the operating models based on the retrieved operating parameters.

30   13. The method of claim 10 wherein the step of retrieving operating parameters from the plurality of solid-state memory die comprises the step of retrieving operating

parameters from a plurality of solid-sate memory device take from the group consisting of flash memory, MRAM, SRAM, DRAM, FRAM, and polymer memory.

14. The method of claim 10 wherein the step of retrieving operating parameters
5   comprises the step of retrieving operating parameters taken from the group consisting of temperature, current draw, access times, and whether the die is functional.

15. The method of claim 10 wherein the step of retrieving operating models for the plurality of solid-state memory die comprises retrieving operating models from an
10   internal database.

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